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Patent Claims

1. Electric motor with a stator having a bore, in which a rotor is arranged, and with a control arrangement having at least one coil with a core, the coil being loaded by the motor current, characterised in that the core (15) of the coil (5, 8, 9) is arranged on the stator (10) whose iron is used for a magnetic circuit.
2. Motor according to claim 1, characterised in that the core (15) is part of the stator (10).
3. Motor according to claim 1 or 2, characterised in that the stator (10) has at least one flux restriction (19 to 22) for the separation of the magnetic flux of the coil (9) on one side and of the stator winding (23) on the other side.
4. Motor according to claim 3, characterised in that the flux restriction (19 to 22) is made as a recess in the stator (10), which is filled with a magnetically non- or poorly conducting material.
5. Motor according to claim 4, characterised in that a cooling medium can flow through the recess (19 to 22).
6. Motor according to one of the claims 1 to 5, characterised in that the core (15) only extends over part of the axial length of the stator (10).
7. Motor according to one of the claims 1 to 6, characterised in that in frontview the stator (10) has a substantially rectangular cross section and that the coil (9) is arranged in the area of a corner of this cross

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section.

8. Motor according to one of the claims 1 to 7, characterised in that the stator (10) and the core (15) are formed with laminated sheet plates.
9. Motor according to claim 8, characterised in that the core (15) is formed by the same sheet blank tool used for forming the laminated sheets (11) of the stator.
10. Motor according to claim 8 or 9, characterised in that in the axial direction the stator consists of at least two different types of laminated sheet plates having different shapes, of which one has no core forming area.
11. Motor according to one of the claims 1 to 10, characterised in that the coil (9) is fitted on a coil carrier (18) which can be pushed onto the core.
12. Motor according to one of the claims 1 to 11, characterised in that the core (15) is substantially oriented in the radial direction.
13. Motor according to claim 12, characterised in that the core (15) is arranged in a volume (14) in the stator (10), which volume (14) is closed by a cover (16).
14. Motor according to claim 13, characterised in that the cover (16) is welded onto the stator (10).
15. Motor according to one of the claims 1 to 11, characterised in that the core (15) is substantially parallel to one outside of the stator (10).

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16. Motor according to claim 15, characterised in that the core (15) is arranged offset from the outside inwards.
17. Motor according to one of the claims 1 to 16, characterised in that the core (15) has the profile of an EI-core.
18. Motor according to one of the claims 1 to 17, characterised in that each of several coils (5, 8, 9) is provided with its own core.
19. Motor according to claim 18, characterised in that at least two of the coils are part coils of a function coil from the group of intermediary circuit coil, filter coil, noise suppression coil or motor coil.
20. Motor according to claim 18, characterised in that the coils are at least two different function coils from the group of intermediary circuit coil, filter coil, noise suppression coil or motor coil.

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